






Roadside Terminals




Proper grading in advance of the system and a traversable runout area beyond the beginning of the system is required for all terminals. When the unshielded upstream roadside is similar to the area downstream of the terminal and it is impractical to extend the barrier, a lesser runout area may be permissible. Refer to AASHTO Roadside Design Guide

NAME	MANUFACTURER		PERFORMANCE CHARACTERISTICS		TEST LEVEL		FLARED	TANGENT	31-inch Height (option)	DISTINGUISHING CHARACTERISTICS	LOCATIONS CAN BE USED
			Energy Absorbing	Non Energy Absorbing	NCHRP 350	MASH					
Vermont G1-d		Generic		X	TL-2		X			No impact head. Shop-bent w-beam 5 ft flare. Concrete anchor block with steel rod connecting at post 3.	Driveway turnouts
Modified Eccentric Loader Terminal (MELT)		Generic		X	TL-2		X			No impact head. Rail installed on parabolic curve. Strut between the steel tube foundation for the two end posts to act together to resist the cable loads. All wood posts.	Should be installed at locations where runout area exists behind and downstream of the terminal.  End of W-beam rail with offset of 4'-0".
Buried-in-Backslope Terminal		Generic		X	TL-3		X			No impact head. Height of W-beam rail should be held constant in relation to the roadway shoulder elevation until barrier crosses the ditch bottom. Rubrail should be added below the w-beam.	Cut sections of a roadway  When the road transitions from a cut to a fill.
Eccentric Loader Terminal (ELT)		Generic		X	TL-3		X			End consists of a fabricated steel element inside a section of corrugated steel pipe. Rail installed on parabolic curve. Strut between the steel tube foundation for the two end posts to act together to resist the cable loads. All wood posts.	Should be installed at locations where runout area exists behind and downstream of the terminal.  End of W-beam rail with offset of 4'-0".
Slotted Rail Terminal (SRT-350)  <a href="http://www.highwayguardrail.com/products/et-srt350.html">http://www.highwayguardrail.com/products/et-srt350.html</a>		Trinity Highway Products, LLC		X	TL-3		X		X	No impact head.  Longitudinal slots on W-beam rail element.  Strut and cable anchor bracket between post 1 and 2 act together to resist the cable loads.  Slot Guards on downstream end of slots.  Steel and wood post options available.  Parabolic flare on wood post.  Straight line flare on all SYTP steel post version and HBA steel/wood post version.	Should be installed at locations where runout area exists behind and downstream of the terminal.  End of W-beam rail with offset of 4'-0".  Wood post option has 3'-0" to 4'-0" offset.







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Flared Energy-Absorbing Terminal (FLEAT)  <a href="http://roadsystems.com/fleat.html">http://roadsystems.com/fleat.html</a>		Road Systems, Inc.	X		TL-2, TL-3		X		X	Rectangular impact front face, with steel tube on top.  Rail has 5 slots (1/2"x4" long) on both the top and bottom corrugations of the w-beam section.  There may also be 3 additional (1/2"x4" long) slots in the valley of the rail which makes it interchangeable with the first SKT section.  Breakaway steel end posts #1 and #2, standard steel guardrail post #3 and beyond.  Cable anchor bracket is fully seated on the shoulder portion of the cable anchor bolts.  All hinge steel post, plug weld steel posts, or wood posts available.	End of W-beam rail with offset of 2'-6" to 4'-0".
TREND 350 Flared  <a href="http://www.highwayguardrail.com/products/et.html">http://www.highwayguardrail.com/products/et.html</a>		Trinity Highway Products, LLC	X		TL-3		X		X	Rectangular Impact Face  All steel driven posts.  Breakaway steel posts at #1 and #2, standard steel guardrail posts #3 and beyond.  Steel Strut between posts #1 and #2.  During head on impacts the system telescopes rearward, using friction between the guardrail panels and deformation of the rail sections to decelerate the vehicle.	End of W-Beam rail with offset of 1' to 4'0"
Sequential Kinking Terminal (SKT)  <a href="http://roadsystems.com/skt.html">http://roadsystems.com/skt.html</a>		Road Systems, Inc.	X		TL-2, TL-3			X	X	Square Impact Face.  Has a feeder chute (channel section that surrounds the rail) that gets wider at the downstream end.  Breakaway steel end posts #1 and #2 and standard steel guardrail posts #3 and beyond.  Rail has 3 (1/2"x4" long) slots in the valley of the rail.  There may also be an additional 5 slots (1/2"x4" long) on both the top and bottom corrugations of the w-beam section, which makes it interchangeable with the FLEAT section.  Cable anchor bracket is fully seated on the shoulder portion of the cable anchor bolts.  All hinge steel post, plug weld steel posts, or wood posts available.	End of W-beam rail with offset of 0 to 2'-0".

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Extruder Terminal (ET-Plus)  <a href="http://www.highwayguardrail.com/products/etplus.html">http://www.highwayguardrail.com/products/etplus.html</a>		Trinity Highway Products, LLC	X		TL-2, TL-3			X	X	Rectangular Impact Front Face (Extruder Head).  Rectangular holes in 1st rail support the tabs of the cable anchor bracket.  Steel HBA and SYTP and wood post options are available.  SYTP Retrofit in tube sleeve option available.	End of W-beam rail with offset of 0 to 2'-0".
SoftStop  <a href="http://www.highwayguardrail.com/products/et.html">http://www.highwayguardrail.com/products/et.html</a>		Trinity Highway Products, LLC	X			TL-3		X	X (Only)	Rectangular Impact Face.  Breakaway steel posts at #1 and #2, standard posts 3 and beyond.	End of W-Beam rail with offset of 0' to 2'0"
X-Tension Guardrail End Terminal  <a href="http://www.barriersystemsinc.com/#/x-tension">http://www.barriersystemsinc.com/#/x-tension</a>		Barrier Systems, Inc.	X		TL-3		X	X	X	Impact head with locking bar to lock cables into place.  Strut between the first post and a front anchor post.  Steel and wood post options available.  Tension Cable Based Energy Absorber.  Two cables attached to soil anchor extend the entire length of the terminal.	End of W-beam rail with offset of 0 to 4'-0".
X-Lite Terminal  <a href="http://www.barriersystemsinc.com/#/x-lite-redirective-gating-end-treatment">http://www.barriersystemsinc.com/#/x-lite-redirective-gating-end-treatment</a>		Barrier Systems, Inc./Formet, Inc.	X		TL-3		X	X	X	Only approved with steel post.  Uses a slider mechanism between post 1 and 2 that gathers and retains the rail when hit.  The anchor consists of posts #1 and #2 connected by tension struts and a soil plate below grade on post #2.  Tangent systems uses 3 modified crimped posts and special shear bolts at second and third splice location.  Flared layout uses 6 modified crimped posts and special shear bolts at second splice location.  Flared layout uses blockout at post #2 where tangent does not.	End of W-Beam rail at tangent locations or at flared locations with a 4-ft offset



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Wyoming Box-Beam End Terminal (WY-BET)  <a href="http://www.highwayguardrail.com/products/et-wybet.html">http://www.highwayguardrail.com/products/et-wybet.html</a>		Trinity Highway Products, LLC	X		TL-3			X	N/A	Square Impact Face.  Nose plate welded and insert into box beam and held in place by an end wood post.  Energy absorbing material inside the tubing crushes as the rails telescope. Uses an oversized outer tube that telescopes over the downstream tube.  There is a strut between the first post and a second tube that has no post.	End of 6" x 6" box beam.
Bursting Energy Absorbing Terminal (BEAT)  <a href="http://roadsystems.com/beat-beat-mt.html">http://roadsystems.com/beat-beat-mt.html</a>		Road Systems, Inc.	X		TL-3			X	N/A	Square Impact Face.  The unique components of the terminal attach directly to standard box beam allowing part of box beam barrier to function as part of the terminal.  Breakaway steel end post and a cable anchor system.  Mandrel section of the impact head bursts the tubing to absorb the impact energy.  End tube is 1/8". Remaining tubes are 3/16".	End of 6" x 6" box beam.